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09/717,537	11/21/2000	Christopher G. Kaler	777.335US1	1797

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EXAMINER
VU, TUAN A

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

> A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
> - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
> - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
> - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
> - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11/21/2000_ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-66_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-66_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 November 2000_ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

  If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____ .

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

  a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6)☐ Other: _____ .

DETAILED ACTION

1.   This action is responsive to the application filed November 21, 2000.

Claims 1-66 have been submitted for examination.

Specification

2.   The disclosure is objected to because of the following informalities: the referred to patent

application on page 9, line 14 is not provided with appropriate serial number.

Appropriate correction is required.

Claim Objections

3.   Claim 20 is objected to because of the following informalities: it is the exact replica of

claim 15, both dependent on base claim 12. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Note: 35 U.S.C. § 102(e), as revised by the AIPA and H.R. 2215, applies to all qualifying references, except when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. For such patents, the prior art date is determined under 35 U.S.C. § 102(e) as it existed prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

5.   Claims 1-10, 12-31, 33-38, 41-60, and 62 are rejected under 35 U.S.C. 102(e) as being

anticipated by Underwood, USPN: 6,523,027 (hereinafter Underwood).

As per claim 1, Underwood discloses a system for developing software, comprising:

a version store for storing a plurality of development documents (e.g. Fig. 93A-B; col.

252, lines 21-33);

a plurality of service providers performing different development functions, and each

having a mutually compatible interface(e.g. *user interface, activities, ASP, views* – Fig. 47;

presentation- Fig. 48; *Web & Application Server, Netscape communicator, Internet Explorer* -

Figs. 51-53; *console Site server* – Fig. 60-64; Fig. 56-67; Fig. 72B);

a client having the same compatible interface (e.g. col. 30, lines 35-63), for receiving

commands from a user and for routing them to various ones of the service providers for

execution upon development documents from the version store (e.g. *first server, second server* –

Fig. 1C; Fig. 30-31, 36, 39-42; *router, Wan* – Fig. 124-129).

As per claim 2, Underwood discloses a third party (e.g. col. 293, lines 7-15; *backup*

router - Fig. 127; Fig. 128; *Alta Vista* - col. 315, lines 20-34; col. 289, lines 20-67).

As per claim 3, see Underwood : Fig. 26, Fig. 93B, Fig. 73, 94(Note: source repository

in conjunction with ODBC server is equivalent to version database/store)

As per claim 4, Underwood discloses API and set of methods (e.g. col. 129, lines 15-27;

col. 130, line 55 to col. 132, line 14 -- Note: use of browser and script and windows GUI

embedded functions are equivalent to using API; *JavaBean, ActiveX* - col. 332, lines 37-48;

AFVBActivityWrapper - col. 35, line 56 to col. 37, line 21; col. 37, line 24 to col. 38, line 35).

As per claim 5, see Underwood: col. 121, line 40 to col. 126, line 44 (Note: the diversity

of services to implement ReTa implicitly discloses that each service providers implements less

than all the method in a set of methods called for in the browser session).

As per claim 6, see Underwood col. 129, lines 15-27; *OLE DB* - col. 153, *Database Connectivity*, Description b/w step 8 and step 9).

As per claim 7, Underwood discloses object model exposing the same compatible interface (e.g. Fig. 31, 104-105, Fig. 110, 109A-B, 113-114; Fig. 117 – Note: source save view with model and tree structure to lay out the customer queries and templates is equivalent to object model exposing the interface; Fig. 36, 122 – Note: Rational Rose modeling tool to lay out the user interfacing activity with the required object is equivalent to model exposing the interface).

As per claim 8, Underwood discloses a command-line utility (e.g. Fig. 68-71; col. 187, line 67).

As per claim 9, see Underwood: Fig. 72B, 73-74.

As per claim 10, Underwood discloses merge subsystem (e.g. *merge* - col. 90, line 59 to col. 91, line 14)

As per claim 12, Underwood discloses a service provider for a software development system, comprising:

code for performing a development service in a software development system (e.g. Fig. 65-67, 68-71; Fig. 72A; Fig. 74-75; Fig. 78-83B – Note: service to debug and support change tracking are equivalent to code for software development service);

an interface for communicating with a set of further service providers (e.g. *Workstations* and *Windows, Netscape, I explorer, Oracle client/enterprise* -- Fig. 65-66) and with a client for receiving development commands from a user (e.g. Fig. 10-14; Fig. 72B; Fig. 77-82).

As per claims 13 and 14, Underwood discloses a version store for storing and retrieving

development documents and processing one or more thereof (e.g. Fig. 93A-B; SourceSafe - Fig.

110 – Note: check in files into version control repository is equivalent to version store).

As per claim 15, Underwood discloses query processing service (e.g. col. 123, line 56 to

col. 124, line 21; col. 129, lines 5-57).

As per claim 16, Underwood discloses enlistment management (e.g. Activity

Framework: *BOMapping, AFCollection, AFUIList, EventHandler, PersistableObj,*

SystemPreferences, TrackingManager -- cols. 35 – 62; Fig. 18-21).

As per claim 17, Underwood discloses interface for holding, storing and retrieving

copies of documents (e.g. col. 37, lines 30-33; Fig. 64, 111; col. 164, lines 16-18; Fig. 93A).

As per claim 18, Underwood discloses compatible interface (e.g. *Activity* – Fig. 15B;

SubActivity – Fig. 17B; Fig. 19-22 – Note: server communicating with activity context of client

implicitly discloses interface compatibility) for communicating with further providers (e.g. *first*

server, second server – Fig. 1C; Fig. 30-31, 36, 39-42).

As per claim 19, see Fig. 93A.

As per claims 20-21, refer to claims 15 and 4 for corresponding rejections, respectively.

As per claim 22, see claim 5.

As per claim 23, Underwood discloses providers providing subsets of methods (e.g. Fig.

65; Fig. 72B; Fig. 93-101 – Note: each module performed by each team in the configuration

process is equivalent to subset of methods; col. 119, line 35 to col. 122, line 67 - Note: each

service performing a subset of the Framework runtime services is equivalent to subset of

methods).

As per claim 24, refer to claim 6.

As per claim 25, Underwood discloses a client for a software development system

having a plurality of service providers, comprising:

means for receiving commands from a user for executing development operations (e.g.

Fig. 10-14; Fig. 72B; Fig. 77-82);

an interface for communicating with compatible interfaces of all the plurality of service

providers (e.g. *user interface, activities, ASP, views* – Fig. 47; presentation- Fig. 48; *Web &*

Application Server, Netscape communicator, Internet Explorer - Figs. 51-53; *console Site server*

– Fig. 60-64; Fig. 56-67; Fig. 72B).

As per claim 26, Underwood discloses means for accessing and processing a plurality of

enumerators (e.g. col. 29, lines 5-15; col. 35, lines 30-54; Figs. 103A, 147 – Note: Collection and

marshalling as well as analysis/browsing of HTML/ASP/Scripts are equivalent to enumerator;

Fig. 101-118 – Note: SourceSafe display of items is equivalent to enumerating and mapping to

user's criteria).

As per claim 27, Underwood discloses a merge subsystem (see claim 10; col. 258, lines

50-66).

As per claim 28, Underwood discloses a plurality of preprocessors for receiving and

modifying the input stream representing a plurality of input development documents (e.g. Fig.

94—103A; Fig. 128, 145B, 149, 151 – Note: security server and version control servers are

equivalent to preprocessors); a merge engine for outputting a merge document (re claim 10; col.

258, lines 50-66 – Note: preprocessors to route the request for merge to PVCS server are

equivalent to preprocessors for merge subsystem).

As per claim 29, Underwood discloses a selection of hosts and servers and security

services (e.g. col. 318, lines 47-67; col. 289, lines 28-60; *Routers* – col. 311, line 46 to col. 312,

line 12; Fig. 124-127); hence discloses a selection service for processors, i.e. a broker, some of

which, implicitly, can be merge subsystem processors.

As per claim 30, a plurality of postprocessors outputting a merge document is implicitly

implied from the merge processing service as disclosed in claims 28 and 10 (Note: a server

operable (PVCS server) to yield a merged document is a postprocessor while the preprocessors

are those who take the input for the merging operation; and the plurality of processors to take the

output back to the client machine are the same processors in the path directing the input going to

the merging machine).

As per claim 31, Underwood discloses keyword processing *(ByRef* - col. 298, lines 24-

45)

As per claim 33, refer to corresponding rejection set forth in claim 13.

As per claim 34, Underwood discloses a merge system for a software development

system, comprising: a merge engine for merging development documents into a merge document

(e.g. *merge* - col. 90, line 59 to col. 91, line 14; *NoActionsMerge* - col. 258, lines 50-66); a merge

command (e.g. col. 90, line 59 to col. 91; Fig. 106-118 – Note: merge command is implicit to

PVCS commands); a plurality of merge preprocessors (see claim 28); and a merge broker (see

claim 29).

As per claim 35, see Underwood: Fig. 104-118.

As per claim 36, this claim is inherent to selection of processors in claim 29 above.

As per claim 37-38, these claims limitations are implicitly disclosed via claim 29 and 30.

As per claim 41, Underwood discloses a method for developing software using versioned documents in a programmed digital computer, comprising:

sending commands from a client through a versioning interface (e.g. Fig. 93a; Fig. 103A-118);

receiving the commands in a plurality of service providers all having an interface compatible with the versioning interface (e.g. Fig. 75-85; Fig. 93A-103A; Fig. 104-118);

executing the commands in the providers (e.g. Fig. 86, 98-103A, 111-116; Fig. 132A – Note: SourceSafe service checking in of documents is equivalent to processing of user commands);

retrieving and storing a plurality of development documents in a version store (Note: this is inherent to SourceSafe service from above), while executing the commands.

As per claim 42, this claim is implicitly disclosed by virtue of corresponding rejections addressing limitations in claim 1 such as plurality of providers and routing, and claims 29 or 30.

As per claim 43, Underwood discloses an interface for retrieving different from interface for version store (e.g. *source repository and ODBC/assembly/test* – Fig. 42; Fig. 65).

As per claim 44-46, refer to corresponding rejections as set forth in claims 4-6, respectively.

As per claims 47, 48, and 49, Underwood discloses selecting providers and replacing providers; adding another provider (col. 289, lines 20-59; col. 311, line 46 to col. 312, line 12; Fig. 124-127 – Note: selecting providers or routing to alternate servers is equivalent to replacing and adding providers, the selecting of services to effect versioning and processing of documents is implied in this selecting and routing through gateways or firewalls); and replacing client with a

third-party provider (e.g. col. 293, lines 7-15; *backup router* - Fig. 127; Fig. 128; *Alta Vista* - col.

315, lines 20-34 – Note: replacing standard browser security check with third-party security

service is equivalent to replacing client processes with commercial processes) with the same

versioning interface.

As per claim 50, this is a medium version of claim 41, hence incorporates the same

rejection as set forth in claim 41 above.

As per claim 51, Underwood discloses a method for developing software in a

programmed digital computer, comprising:

receiving a user command from a client having a versioning interface in one of a plurality

of service providers each having an interface compatible with the versioning interface (e.g. Fig.

75-85; Fig. 93A-103A; Fig. 104-118);

executing an operation in response to the user command (e.g. Fig. 86, 98-103A, 111-116;

Fig. 132A; Fig. 134-144);

communicating a result through the interface (e.g. Fig. 76A-86; Fig. 134-144);

repeating the above steps for others of the services providers (e.g. Fig. 126-129; col. 293,

lines 7-15; *backup router* - Fig. 127; Fig. 128; *Alta Vista* - col. 315, lines 20-34 -- Note: this step

is implicitly disclosed via a selecting of commercial services, routing and web session/activities

from above).

As per claims 52-54, refer to claims 13-15 for corresponding rejections; and Underwood:

Fig. 93A-B; col. 252, lines 21-33.

As per claim 55, this claim include similar limitations as in claim 17, hence is rejected

herein using the corresponding rejection as set forth therein.

As per claim 56, this is a medium version of claim 51, hence incorporates the same

rejection as set forth in claim 51 above.

As per claim 57, Underwood discloses a method for developing software in a

programmed digital computer, comprising: receiving a request for merging development

documents (e.g. col. 90, line 59 to col. 91; Fig. 106-118 – Note: merge command is implicit to

PVCS commands); selecting one of a plurality of merge preprocessors (see claim 29); modifying

at least one development documents in the selected preprocessor (see claim 28); merging the

development documents in a merge engine to produce a merged document (see claim 28).

As per claim 58, see claim 38 and 37 respectively.

As per claim 59, see claim 36.

As per claim 60, Underwood discloses documents with content and properties (e.g.

Properties /scroll down *11400* - Fig. 114 – Note: content is inherent to any source file).

As per claim 62, this is the medium version of claim 57, hence incorporates the same

rejection as set forth in claim 57 above.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   Claims 11, 32, 39, 40, and 63-66 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Underwood, USPN: 6,523,027, in view of (no author) Derwent 199741, JP-

09198393, "Document searching apparatus in database", Pub. Date: July 31, 1997, IPC: G06F

017/30 (hereinafter JP-DW-1997).

As per claim 11, in reference to claim 1, Underwood only discloses a SourceSafe tool

with ways to administer documents or construct a header using a set of keywords (e.g. Fig. 109;

col. 170, line 55 to col. 171, line 10; col. 183, lines 40-43) or COM interface using keyword

(*ByRef* - col. 298, lines 24-45); but does not specify a keyword expansion unit. In a similar

database query method analogous to database search and administrating of documents by

Underwood, JP-DW-1997 discloses a keyword expansion unit (Derwent excerpt: front page). It

would have been obvious for one of ordinary skill in the art at the time the invention was made

to add to Underwood's versioning system the keyword expansion unit or service as taught by JP-

DW-1997 because this expansion would expand the search criteria input and improves search

efficiency and adaptation rate.

As per claim 32, in reference to claim 31, Underwood discloses a query service (re

claim 15; col. 123, line 56 to col. 124, line 21) and a merging service (see claim 27-28); but does

not specify a plurality of keyword expanders and a keyword broker for selecting among the

expanders. In view of the selection service as mentioned in claim 29 and the use of keyword

expansion service as taught by JP-KW-1997 from above, it would have been obvious for one of

ordinary skill in the art at the time the invention was made to add to the selection service and

query/COM service by Underwood from above the expansion services and broker thereof to

select among keyword expansion services in the same manner as to select merge service or

firewall services as mentioned above, for the same reasons as mentioned in claim 11 and also

because, when performing keyword expansion, this would alleviate query resources, thereby

expediting the COM query process.

As per claim 39, this claim incorporates the same limitations as addressed in claim 32.

Hence, the limitations of receiving a expansion command and selecting of expanders in response

thereof, a keyword broker and plurality of expanders would also been obvious using the rationale

set forth in claim 32, because receiving a expansion command is implicitly disclosed in the

combined teachings used therein.

As per claim 40, Underwood discloses keyword processing for COM and object

querying and JP-DW-1997 discloses expansion of keyword for search. Underwood, however,

specifies domain differential between objects and components assembled in the modeling

scheme (e.g. 342, lines 20-29), hence suggests a domain associated with objects to retrieve from

the objects reuse repository.   It would have been obvious for one of ordinary skill in the art at

the time the invention was made to associate a domain (as suggested by Underwood) to the

keyword expansion as taught by JP-DW-1997 and combine such expansion with Underwood's

COM querying service because this domain defines better the object to be retrieved and enhances

the expediency with which the keyword expansion is operable to help such query as taught by

Underwood.

As per claim 63, Underwood discloses a method for developing software in a

programmed digital computer, with selecting of resources processors or services to respond to

command or request to modify or check, retrieve documents (re claim 51 or 57 for cited

teachings by Underwood) but does not disclose receiving keyword expansion request, parameter

specifying a keyword domain; selecting keyword expanders; and expanding keywords in the document in the selected expander.

But these above limitations have been addressed correspondingly in the above claims 11 (keyword expansion request and execution), 32, 39(selection of expanders), and 40 (keyword domain specification); hence are rejected herein using the rejections as set forth respectively therein.

As per claim 64, Underwood suggests keywords that are more used than others (e.g. *Archive, Revision, Date* - col. 170, line 55 to col. 171, line 10; col. 183, lines 40-43) but does not specify determining that keyword expansion is required nor does Underwood specify selecting a generic keyword expander nor and expanding keyword using such generic expander. It is noted that the use of keywords is to alleviate systematic search of text or characters in documents by grouping of terms or characters or documents into one keyword; and JP-DW-1997 is an example of such attempt to expedite search (see claim 11). In view of a automatic keyword expansion to expedite the search as taught JP-DW-1997 and the suggestions on frequently used keywords by Underwood, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the keyword settings by Underwood so to include determining which keyword is generic and the expansion thereof is required and apply JP-DW-1997 for expansion based on the most frequently used keywords, hence the generic expander service, because using the expansion service on most generic or more used keywords(i.e. generic expander) in the development documents processing/retrieving as taught via Underwood's keyword settings would be more accelerated and optimization of resources as taught by JP-DW-1997 more enhanced.

As per claim 65, the limitation of expanding in accordance to keyword-domain is herein rejected using the rejection of claim 40.

As per claim 66, this is a computer medium version of claim 63 above, hence incorporates the rejection as set forth therein.

8.   Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Underwood, USPN: 6,523,027, as applied to claim 60, in view of (no author) Kramer, USPN: 6,216,140 (hereinafter Kramer).

As per claim 61, Underwood discloses merging of content (e.g. col. 90, line 59 to col. 91, line 14; *NoActionsMerge* - col. 258, lines 50-66) but does not specify merging separately from properties.   Kramer, in a development documents merging method analogous to Underwood's, discloses merging with separation of attributes and other properties (e.g. *limited value attributes* - col. 11, line 15 to col. 12, line 31).   It would have been obvious for one of ordinary skill in the art at the time the invention was made to add to Underwood's merging technique the merging of attributes as suggested by Kramer because, according to Kramer, "more inclusive or conservative of the changes between source and target versions is favored".

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat No. 5,649,200 to Leblang et al., disclosing plurality of views and data structures for a versioning/merging.

U.S. Pat No. 5,978,579 to Buxton et al., disclosing API and template for formulating request for data query.

U.S. Pat No. 5,862,325 to Reed et al., disclosing information retrieval via multi providers and archiving.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (703)305-7207. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 746-7239, (for formal communications intended for entry)

or: (703) 746-7240 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington. VA. , 22202. 4th Floor(Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

VAT
August 8, 2003

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100